Occasional Reviews

Medical stereotypes

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There seems to be a widespread belief that doctors in certain specialties have distinguishing characteristics. This has not attracted much serious attention, but it may play some part in a doctor's choice of career and even have unsuspected effects on the general public.

American studies

Studies of personality factors in doctors are comparatively common; the most impressive in relation to specialties is that of Myers and Davis,[1] who followed up more than 4000 male American students 12 years after testing them with the Myers-Briggs type inventory and found that many of the 16 "types" included or excluded some branches of the profession at significant levels. Analyses of this sort, however, can no more be compared with popular stereotyping than anatomical diagrams can be compared with cartoonists' impressions.

Probably the first attempt to study stereotypes of specialists came from Becker and his colleagues of the Chicago school of medical sociology. In their classic study *Boys in white*[2] they organised the suggestions made by medical students into ten traits, and then asked the students to rate seven specialties on them. The traits were very job-orientated: getting on well with children, for example, was thought to be a leading characteristic of paediatricians.

In 1962 Bruhn and Parsons[3] used a questionnaire developed by the World Federation for Mental Health on students from each preclinical and clinical year at the University of Oklahoma School of Medicine. Their questions about four medical disciplines were much more suitable for eliciting stereotypes, but in their report two years later they commented sadly that since no other medical school had used the questionnaire, they were unable to make any comparisons.

Present study

The question put to Manchester medical students in the present study was derived from the one used by Bruhn and Parsons, and some cross-cultural comparisons may therefore be made.

In the week before they started at medical school all 160 students of the 1971 Manchester entry were sent a questionnaire that was the first instrument of a longitudinal study. It was completed by 159 of them. One of the questions on it read: "*It is commonly believed that certain types of people are more likely than others to be interested in various medical specialties. Below is a list of characteristics more or less true in four branches of the profession. For each characteristic, indicate the one type of doctor of whom you think it is most typical.*"

The responses are shown in percentages (table I) and appear to reflect some popular beliefs about surgeons, psychiatrists, and general practitioners, though physicians are more shadowy figures and never have the highest or lowest percentages.

TABLE I—*Students' opinions before entering medical school (n = 159)*

Characterisation	Surgeon	Physician	Psychiatrist	GP	No answer
Domineering and arrogant	68·4	11·8	5·3	7·2	7·2
Decisive and energetic	53·9	21·1	0	23·7	1·3
Deeply interested in intellectual problems	3·3	11·8	78·9	3·3	2·6
Deeply interested in people	0	9·2	31·6	55·9	3·3
Confused thinker	2·6	15·1	44·1	15·1	23·0
Emotionally unstable	16·4	7·9	52·0	7·2	16·4
Extremely patient	15·8	16·4	34·9	32·9	0
Friendly personality	3·3	15·8	5·9	72·4	2·6
Sensitive to a wide range of factors when evaluating a medical problem	5·9	29·6	15·1	48·7	0·7

TABLE II—*Students' opinions in final year (n = 123)*

Characterisation	Surgeon	Physician	Psychiatrist	GP	No answer
Domineering and arrogant	72·4	11·4	7·3	5·7	7·2
Decisive and energetic	64·2	21·1	0	9·8	4·1
Deeply interested in intellectual problems	0·7	38·2	56·1	0·7	4·1
Deeply interested in people	0	3·3	28·5	65·0	3·3
Confused thinker	6·5	5·7	43·9	18·7	25·2
Emotionally unstable	17·9	0·7	65·0	2·4	13·8
Extremely patient	4·9	19·5	34·1	37·4	4·1
Friendly personality	6·5	8·1	4·1	77·2	4·1
Sensitive to a wide range of factors when evaluating a medical problem	0	47·2	1·6	49·6	1·6

TABLE III—*Opinions of preclinical students (n = 199). (From Bruhn and Parsons)*

Characterisation	Surgeon	Internist	Psychiatrist	GP
Domineering and arrogant	91	5	3	1
Aggressive and full of energy	46	9	3	42
Deeply interested in intellectual problems	4	17	75	4
Deeply interested in people	0	3	23	75
Confused thinker	10	16	55	19
Emotionally unstable	17	7	70	6
Extremely patient	6	11	30	53
Friendly, pleasing personality	1	11	8	81
Sensitive to a wide range of factors when evaluating a medical problem	4	43	11	42

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TABLE IV—*Opinions of clinical students (n = 144). (From Bruhn and Parsons)*

Characterisation	Surgeon	Internist	Psychiatrist	GP
Domineering and arrogant	90	5	3	1
Aggressive and full of energy	53	11	1	36
Deeply interested in intellectual problems	2	40	57	1
Deeply interested in people	0	8	15	77
Confused thinker	10	8	73	9
Emotionally unstable	14	4	77	4
Extremely patient	4	24	31	41
Friendly, pleasing personality	0	13	6	81
Sensitive to a wide range of factors when evaluating a medical problem	3	65	5	27

The same question was put to the students in 1976, just before their final examinations, though by then only 123 of them remained, the rest having left the medical school or stayed down a year to take a BSc degree. During the undergraduate course the students had been in contact with many surgeons, physicians, psychiatrists, and general practitioners; there had been ample opportunity for them to modify their views to fit reality, and changes were only to be expected. The responses, again in percentages, are shown in table II. There were a few changes, but the most striking feature is the similarity to the earlier opinions—so much so that no test for statistical significance is necessary. Either the stereotypes were impervious to reality or else they reflected it.

The study of Bruhn and Parsons was cross-sectional; they combined the responses of first and second year preclinical students and also of third and fourth year clinical students. Their question was almost identical, and their most comparable results are shown in tables III and IV, again as percentages. They noted that "No opinion" responses averaged 6-7% per item and were excluded from analysis.

No comment seems to be necessary.

References

1 Myers IB, Davis JA. *Relation of medical students' psychological type to their specialties twelve years later.* Los Angeles: Americal Psychological Association, 1964. (Obtainable from National Foundation for Educational Research, Windsor.)

2 Becker HS, Geer B, Hughes EC, Strauss AL. *Boys in white.* Chicago: University of Chicago Press, 1961.

3 Bruhn JG, Parsons OA. Medical student attitudes toward four medical specialties. *J Med Educ* 1964;**39**:40-9.

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Tertiary Educational Assessment with Mean Individual Level Knowledge

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Abstract

It is proposed that Tertiary Educational Assessment should be made using a Curve-Unifying Paradigm with its Scientific And Ultra-Conservative Experiment Ratio. Central Ranking Evaluation And Marking was used to process examination results, generating the Mean Individual Level Knowledge for the group. The concept of MILK grew from the need to encourage the average examination candidate and with it came the need for a Judgmental Understanding Goal. The results of some candidates required further handling by the addition of Student's Universal Grade Averaging Regimen.

Introduction

The marking of written examination papers climbed to new heights when the Random Assessment by Projected Examination Scripts (RAPES) was compared with well-established but labour-intensive conventional methods.[1] This study confirmed that the projection of candidates' scripts down flights of stairs was as effective a method of assessment as was the conventional system for the subjective marking of essay questions (CONVENT). The bulk of candidates fared equally well with both techniques, and the time-saving RAPES method eliminated any subjective bias on the part of the examiners. Nevertheless, several candidates who excelled with the CONVENT did poorly with RAPES and vice versa. As Number Utilising Neophytes we were used to CONVENT methods and sought to try RAPES, only to confirm the problem of those outside two deviations from the norm. Extension of the method to other examination techniques—for example, orals—disclosed further problems.

Consequently, we decided to assess the effects of a Mean Individual Level Knowledge Yardstick, Which Averaging Years, emphasises the score of the mediocre candidates, thereby providing them with a much-needed ego-boost.

Method

Attachment of the Traditional Education And Training to an Upper Decile Discrimination Excellence Rating was seen to cause our problem of non-normal candidates. This was rectified by using a Paralogical Averaging Plateau, a statistical manipulation that also produces a steep downward curve in the final marks of those candidates at the extremes. The candidates in the middle then benefited from the Central Ranking Evaluation And Marking by exhibiting acceptable Mean Individual Level Knowledge.

The concept of MILK came from the need of the average candidate to receive a Critical And Rational Teaching Of Necessities in addition to a Judgmental Understanding Goal. Thus the storage and retrieval techniques could avoid turning Mean Individual Level Knowledge Standardisations On Unsound Ranking.

The system was tested by a Clinically Heuristic End-Excluding Stochastic Examination in conjunction with Conventional Unadaptable Ranking Devices (CONVENT, above). The Weighted Holistic Examination Yield was assessed by the Positive Health In Life And

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